

W. Heape
*Emigration, Migration
and Nomadism*

1946

Heape 1931

* (原書 + 附註 + 附圖)
(June, 12, 1931/1933)

nomadism.

def. emigration + etc

p. 321. but differs radically from it
in as much as the nomad normally
wanders over a definite territorial area

p. 322. The true nomad has no fixed
home

* Emigration, Migration and Nomadism
by Heape, W., 1931.
Cambridge

p. 16. A nomad is, strictly, one who lives a
roaming or wandering life, and if that be a
true definition of the word, then there are
two kinds of nomads, (a) those who roam
over a definite area or territory, and (b)
those who recognize no boundaries to their

wanderings.

As a matter of fact, it will, I think, be found that as a rule the great majority of nomadic peoples and nomadic animals roam only over a definite territory. ~~then~~ ^{primarily}

p.17 primarily nomads occupy a definite territory, and their home is the whole area of that territory, and they resent any encroachment upon it.

p.25... nomadic animals may wander irregularly over their territory, ... or they may conduct their wanderings in a systematic manner, visiting the whole of it in one year, in which case the ordering of their wandering is governed by the seasons; or they may take many years to cover the whole area. They may also, and commonly do, migrate for breeding purposes to special regions within their territory.

Chapter 3: nomadism

p.26. ... it may, I think, be claimed that all species of animals capable of locomotion are nomads to some extent. Many ungulates for instance, wander over a definite area of country, constantly seeking change of pasture within that area; while they are followed by the animals which prey upon them. The same habit will be found to be practised by almost all species of animals. In fact, it is surely correct to say that all animals which are compelled to hunt for their food are nomadic, to some extent, from time to time, within boundaries beyond which they rarely stray.

nomadism 7 food 7 説明はこれにて可矣

p. 321. --- it is based on the necessity to find ^{food} for sustenance of the life of the individual; that is to say, it is essentially an alimental movement. ---

p. 25 --- the nomadic habit, as practised to-day amongst human beings, is usually consequent upon the necessity, continually recurring, to find fresh pasturage. The origin of this habit in man is no doubt primeval. Surely it was an essential characteristic when he roamed as a hunter in search of food, and remained with him as no less a necessity when he became possessed of domesticated animals, and wandered with them as shepherd, in search of food for his flocks and herds.

migration of immature individual / 若鳥の社会性
(社会 reproductive desire) 社会性. social
+ 社会性 + 社会性, 社会性 migration = immature
社会性 社会性 社会性 社会性 社会性 社会性.

* Chapman, Abel, 1924. The borders and beyond.

G. Coward, T. A. 1912 The migration of
birds.
" 1926. The birds of the British
Isles, vol. III.,
on migration of immature birds.

4
migration = 社会性.

p. 207: marshall, 社会性 =

--- as pointed out by Abel Chapman* (1924),
adolescent birds accompany the mature ones on
their migration northwards, though not necessarily
going the whole way. The bar-tailed godwit
takes three years to become mature, and the
gray plover the same. The sanderling requires
two years, if not three, and the knot, turnstone,
oystercatcher and dunlin are similar. None
of these birds breed until they assume the
plumage of maturity, so it must be concluded
that their migratory impulse is derived from
association with the other birds. The first
four of the above-mentioned birds are veritable
"globe-spanners." On the other hand, as it
well known for some species, non-breeding
(that is, barren) birds (e.g., gulls) very
usually do not migrate.

233 (herring) = 鲱魚 社会单位

It p. 266. It is of great interest to note that the herrings which frequent our seas are divided into what may be called separate tribes which apparently do not interbreed, since each tribe has its own particular breeding area. It is further of interest to find that separate shoals of each tribe are described as consisting solely of either adult breeding fish or of young immature fish; and that the latter, while they do not accompany the adult shoal to the breeding ground, follow it part of the way there. As the young reach maturity they appear to be drafted into the adult shoal.

emigration (mass emigration)

Lemming (*Myodes lemmus*)

p. 76 --- All this big tract of country is the lemming's normal breeding ground, the species being split up into colonies, each of which apparently occupies well-defined territories.

p. 79

o lemming, local = lemming year $7 \frac{2}{3} \pm 4.2$

o migrate, $1 \pm = 31.2 \pm$ lemming, colony = 5.7 ± 4.7
 $7.1 \pm 10.7 \pm$

i.e. This is the only course they can take without infringing on their neighbour's rights, and it is only open to them because the area is not fit for habitation by the species.

p. 84. It is a mass movement, yet they are not sociable among themselves, their mental capacity is low, they are really individual wanderers who, from force of circumstances, wander in masses; it is not a voluntary concerted movement, and in this respect differs from mass emigration of the springbuck described below.

ungulate

p. 102. From what I have learnt of other animals' habits I have long been of the opinion that antelopes, wherever they are found, as a rule live in communities which occupy a definite territory outside which they do not stray; and I find strong evidence in favour of this view from remarks casually made.

p. 103. ... except at long intervals when large hordes of them emigrated, and when they emigrated they, like the lemming, did not encroach upon territory already occupied by herds of their own species.

(black wildebeest, 阿爾卑斯 = 24)

p. 107 Andrews (1926)* says that the grass land antelope in Central Asia, *Gazella gutturosa*, while scattered in innumerable small herds during the non-breeding season, collect together in thousands in special localities for parturition.

* On the Trail of Ancient Man.

(mass emigration)
butterfly, migration, 1/2 to

p. 159 There is undoubtedly a general tendency for animals in the northern hemisphere both to migrate and to emigrate northwards, and for animals in the southern hemisphere to journey southwards for such purposes.

" Amongst animals which travel on land it is, I think, undoubtedly the case that territorial rights affect the course of their movements; but in the case of winged insects I can find no evidence of any such hampering conditions; they can apparently go where they please.

42 $\frac{3}{4}$ = 75% 1 + 25%

p. 120. All breeders of stock know that after prolonged occupation of a definite area of pasture by a particular species of stock they cease to prosper on it. This is not due to scarcity of food, but to some deterioration in the quality of the food, so far as that particular species is concerned. Though there is an ample supply of food it is noticed that the young, especially, do not thrive on it; the old members of the herd also show clearly that something in the quality of the food is not suiting them, and I am satisfied that their breeding powers will suffer if they are kept on that land.

It is not clearly proved what causes such deterioration in the quality of the food. It is confidently supposed to be primarily due to the long continued deposition on the land of the dung and urine of the same species which lives on the herbage so manured; in which case the problem remains for bacteriologists and chemists to solve. However that may be,

in Jersey in the United States, that many hundred acres of
underbrush which will not feed horses or cattle or
any stock are being burned on the land and are
being sold to the same owner of stock. These
owners of good horses or cows which is good for
land and the cattle have been using the same
and will be so continued to until all the land
the horse which horses have not upon, or until
cattle and cattle are the products of land which
should have been put upon. Thus the continued burning
of land by any one species of stock is harmful
to others and land for that species. Though it
is not directly shown by another species of
stock or horses with the same as land which
is harmful for cattle but there being no horses
on it. The time taken for each burning of
land means an abundance with the return
of the soil.

But pasture is shared with horses and
cattle and horses for some years. Thus a horse
which farmer will pay high rate and will
will not be the same as the same horse.

10
On land will quickly recover, it is to be the land
and crops grow on it. Hence if the grass or
stains land be burnt, the young grass which
springs up quickly after the first good shower
of rain, will be seen from one such storm
and the fresh or new which is usually coming
it may at once be put to rest, and are again
thrown there. Similarly with meadows, or
stretches of land which are under water for
some months each year like the "usches"
in the Texas country, never be once stained.

I suggest, therefore, that the gradual
emigratory movement of the horse is brought
by the results which follow their long occupation
of a definite area in great numbers.

the $\frac{1}{2}$ - 1 - 1 + 100 (87)

p. 251 At one time I had thought it possible that the desire for 'clean' and unbreeding purposes existed in some or all migratory movements. All breeders know that 'land' which has been continuously occupied by a species for a long time becomes 'stale' so far as that species for a long time because 'stale' is concerned: that admits to cease to thrive on it, and that it has a deleterious effect on the growth and survival of the young. I have already referred to this matter several times and am concerned in relation to the movement of moose. But it is only true for cattle & is p. 252 true also for birds.

It is quite certain that animals themselves recognise the difference between clean land and land which has been rendered 'stale' by constant occupation by the same species. It is significant that occupation by a different species does alter the conditions. Thus sheep may with advantage be

on land which has been covered by ice
cattle by prolonged exposure of wet ground
and the reverse. Thus, it must be covered
by a surface for which a good surface at a
time it will surely show itself, showing
if aided by rain and wind and some
other influences, the surface which was
subject to the long snow and ice.

It does not therefore, seem probable
that birds and other birds find for
their nesting grounds that they find
it after having searched it, a long time
for several months and then to find
as a breeding ground after it has been
changed by the heavy rain, the snow,
the snow and other birds of winter.
Simon (London 1816)* shows that the great
couple regularly change the nesting area
to, hygienic reasons.

* See Simon, The Golden Eagle,
Nature No. 2427. Vol. 10, 11.

In the case of many non-migrating birds,
they also assume some definite colors
in winter and in the breeding season. Some
birds which breed in a particular section
will probably assume a new kind of color
at one or in the next month, and a male
may wish to lay down to give the
breeding season a new look.

4
hysteria in mass migration

1881. Observed at these times, in the course
of mass migrations, I have described as a
change of sensibility in the individual, which
enters in the human system, and is evidence
of unusual excitement, and this has led me
to suggest that it may occur under hysteria
in the same way as it does in hysteria.

In hysteria there is a loss of reason, and a
change of sensibility, and the individual is
abnormally active, and is at the same time
in a state of mass migration of the function.

Valley, 1922. The Power of East Africa
and the Culture. New York, Soc.

1922, 1923, 1924. On Certain Factors
connected with the Evolution of the Human
Group. Translated. Address to the Royal
Anthropological Institute.

New York, Anthropological Institute
1924.

Turning of the migration

When 2, 12. A few lines of the text of the
Hind, says the turning of the individual state
abruptly at a definite limit although the process
immediately following this turning is not
in grass and water.

112. This is, I think, a clear indication
of the transition into which each variety of human
its movement within the territory and is not
strongly enough to turn the individual state
strictly determined, the course of the individual right
act as to the boundaries which each must not
exceed in the movement of the individual.

There are, to be the next part, a number
of limits, boundaries which may be determined as
geographical boundaries, boundaries of space,
not as boundaries which have a direct relation
to territorial processes, such as to land to
establish for people and for the state. But, as I will wish to show, the process already
such as, but on the other hand, that it is
determined by the state which is not connected
with the state of territorial right.

and then attempt to answer a few straightforward and basic questions in order to proceed.

as that we have particularly in view
the habits of the smaller birds, or common
birds, in making up the nest, but in relation
to the material used in building. At the same
time we have detailed description of colonies
of a few species in certain cases, which show
that they make a slight regard to the site
of the nest.

$$1. \quad \text{If } \mathcal{L} \text{ is a linear space, then } \mathcal{L} \text{ is a linear space.}$$

Forrester, L. A. 1899. The Natural History
of Lake Superior. 4 vols.

(Hafner) and (Hafner) - in (Hafner)
 to (Hafner) (Hafner) of (Hafner) (Hafner)
 No. 1117 -

Neutral Territory

2.2 At the same time exclusiveness is not an essential characteristic of any one animal or even of any species of animal; we are now and then to find those whose relationship with their fellow species is especially during the non-breeding season, and most especially in neutral territory, that in territorial animals is their ally, will tolerate another.

Such neutral territory is commonly frequented by the members of different species of the same species. But not only so; it is frequently found that members of species of widely different species will live peacefully together in neutral territory, where at the same time they have all have their own distinct home territory, which they will defend against incursions by strangers.

Neutral Territory in Birds

p. 50 In birds the neutral space of it is always the nest, the actual breeding place and nursery and in most birds other than

birds of prey, besides the home territory they may at any time have recourse to feeding ground which is neutral territory, where many species collect, either singly, or in pairs, or in flocks, and behave perfectly amicably to one another. Here again there is evidence that friendly intercourse, even amongst birds of different species, is sought for.

p. 55. Batten (1923)* says that small birds which live near the eyrie of a merlin appear to be immune from attack from him. Thus ring-necked pheasants, and starlings, though freely killed by the merlin in the open, remain unmolested by him while living and nesting next door to him. The exhibition of such trust by these smaller birds, of immunity from attack by a recognized enemy because of the proximity of their homes, must surely be associated with some law of neutral territory, or of the

* Batten, H. M. 1923. Inland Birds.

'Territory in Bird Life' 1920

p: 57

Ф. 12345 territory + 1271/2 622117.

2. mate is the neutral territory = + food
7 fixate = 0. $\frac{7}{8}$ 7 $\frac{7}{8}$ n+1.

741v. i.e. A particular position on a particular tree, shrub, gatepost, or high up in the air over it, etc.

Young 1375

p. 129. ... just as a pair of foxes will drive their young away from home, so also single pairs of birds which occupy a definite territory only extensive enough for their own livelihood, drive away their young when old enough to fend for themselves, and compel them to make a home for themselves elsewhere. For instance, a pair of swans which occupy limited territory on a small sheet of water, drives the young away when they are old enough; and if they have learned their lesson, the old male treats them as he would any stranger who intrudes in his territory; he drives them away relentlessly and with ferocity.

The young have not no rights over territory held by their parents if it is not big enough to support them. Only in the case of gregarious animals which range over a wide territory are the young allowed to remain there; and in such cases, when the colony becomes too numerous, either the young are driven out of it when necessity arises, or, failing such anticipatory action, the colony grows far

beyond the capacity of the territory to support it, and mass emigration follows.

p. 44. Amongst solitary breeding pairs of animals which occupy territory only big enough to support themselves, their young are necessarily driven away when they grow old enough to make a living for themselves. Young foxes, for instance, are not allowed to hunt over their parents' territory. Before they are fit for breeding they are turned adrift and live a solitary wandering life until they find a mate and make a home for themselves, during the next breeding season.

The recognition of territorial rights

p. 24. The recognition of rights over a definite territory is one of the very first indications of the growth of civilisation in man. Where such rights are established, where ownership of territory is recognized, home life begins.

p. 25. The more one studies the motives which determine the various movements of animals, the more one is impressed with the almost universally instinctive recognition of 'home', and the rights over home territory which they show and practice. It is indeed on this instinct that the claim for any degree of civilisation among animals must be based. Thus, it is of great interest to observe that in man, this instinct, exhibited with increased strength, which is, in reality, the foundation upon which all his civilization is built up, is derived from identically the same instinct possessed by the lower animals, and both clearly recognized and almost universally respected by them.

mammal = 哺乳動物

p. 211.

plain / caribou = jump 跳 + 来 + 1 跳 =
 The woodland caribou, in order to escape from pursuit by a wolf, for instance, must be able to leap over the fallen timber which constantly obstructs its path, and must do so without loss of speed. Long* has actually watched a company of woodland caribou cows with their calves, engaged in teaching the latter to jump over fallen timber.

*
 Long, William J. 1902, School of the woods.